

Neutron irradiation

There is a wide range of potential applications for neutron irradiations. They vary from irradiating minerals for geochronology studies, subjecting materials to neutron damage for material research, to irradiating tracer substances for various research, environmental, and industrial processes and applications. A total of 57 irradiation facilities are available at seven levels of thermal neutron flux to perform a wide range of irradiations.

Facilities are available for canning of samples for irradiation, post irradiation handling and quick return of the irradiated sample in a suitable shielded container if required. Technical advice on the usage and methods to minimise radiation levels are also available.

The availability of this service is dependent on reactor scheduling. Please contact ANSTO prior to ensure correct scheduling is achieved.



Capability selection

- OPAL low flux (thermal = $2-8 \times 10^{12} \text{ cm}^{-2}\text{s}^{-1}$)
- OPAL medium flux (thermal = $1-4 \times 10^{13} \text{ cm}^{-2}\text{s}^{-1}$)
- OPAL high flux (thermal = $0.6-1 \times 10^{14} \text{ cm}^{-2}\text{s}^{-1}$, fast = $3.5 \times 10^{12} \text{ cm}^{-2}\text{s}^{-1}$ in LE7)
- OPAL fast flux (thermal = $1.1 \times 10^{14} \text{ cm}^{-2}\text{s}^{-1}$, fast = $1.2 \times 10^{13} \text{ cm}^{-2}\text{s}^{-1}$)
- OPAL short residence D (thermal = $5.0 \times 10^{12} \text{ cm}^{-2}\text{s}^{-1}$)
- OPAL short residence N (thermal = $2.2 \times 10^{13} \text{ cm}^{-2}\text{s}^{-1}$)

For further information please contact:

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